

# Postgraduate Certificate

## Infections in Oncology Patients



## Postgraduate Certificate Infections in Oncology Patients

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 4 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtitute.com/us/pharmacy/postgraduate-certificate/infections-oncology-patients](http://www.techtitute.com/us/pharmacy/postgraduate-certificate/infections-oncology-patients)

# Index

01

Introduction

---

*p. 4*

02

Objectives

---

*p. 8*

03

Course Management

---

*p. 12*

04

Structure and Content

---

*p. 16*

05

Methodology

---

*p. 20*

06

Certificate

---

*p. 28*

01

# Introduction

One of the main causes of concern for pharmacy professionals is the infections that occur in cancer patients, as this is one of the main causes of mortality in these patients. Therefore, it is necessary for specialists to know the main complications that can occur in each patient, depending on their cancer, and the best way to treat them. In this program, pharmacists will update their knowledge about the different infections that can occur in oncology patients, as well as immunosuppression in patients.



Cancer treatment

eatm

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*This Postgraduate Certificate that TECH offers to pharmacists will greatly help them to update their knowledge on the relationship between infectious diseases and cancer"*

In order to meet the healthcare needs of the 21st century, it is necessary for pharmacy professionals to keep abreast of advances in this area of care for those suffering from cancer. In these cases, in addition to their own disease, these patients have to be very careful with infections, since there is a high morbidity in these cases.

Infection control has become a great difficulty, especially due to the problems derived from antimicrobial resistance, which has caused pathologies that used to be easily cured to become more complicated, with the consequences that this entails, both for the patients and for the economy, as treatment costs have become longer. In addition, it should be taken into account that, in the case of cancer patients, immunosuppression can make the immune system unable to fight infections.

For this reason, pharmacists should continue their training with educational programs such as the one TECH presents on this occasion, which delves into infectious diseases and the Oncological Process, taking into account, mainly, the problems arising from the different types of oncological patients with sepsis.

Likewise, pharmacists will be able to deepen their knowledge of the relationship between cancer and the different microorganisms that cause infections, as well as those bacteria that have become allies of cancer patients.

This **Postgraduate Certificate in Infections in Oncology Patients** endorses the latest advances in clinical infectious diseases with a teaching program that positions it as an educational product of the highest scientific rigor at international level. In addition, this program provides training and professional development in different areas:

- ♦ Clinical symptoms development medicine to be able to address the infectious health-disease process in a particular person through the study of the most prevalent and deadly infectious diseases, and , in Epidemiology , to study the behaviour of the same phenomenon in a population
- ♦ The indication, performance and interpretation of the main state-of-the-art diagnostic tests to complement clinical skills in the diagnostic process. Emphasizing the most up-to-date microbiological tests used to rapidly diagnose germs and study antimicrobial
- ♦ The complex and determining pathophysiological relationships between the immune response and infectious agents
- ♦ Germs related to neoplasms and chronic non-communicable diseases
- ♦ Development and production of vaccines for the control of morbidity and mortality due to infectious diseases
- ♦ The important field of antimicrobial therapeutics, providing the best available information on the development and production of new antibiotics



*Take the opportunity to train with us and get your degree in Infections in Oncology Patients, endorsed by TECH Global University”*

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*The cure of infectious diseases is one of the main challenges of healthcare. Update your knowledge about this with this Postgraduate Certificate specially designed for pharmacists”*

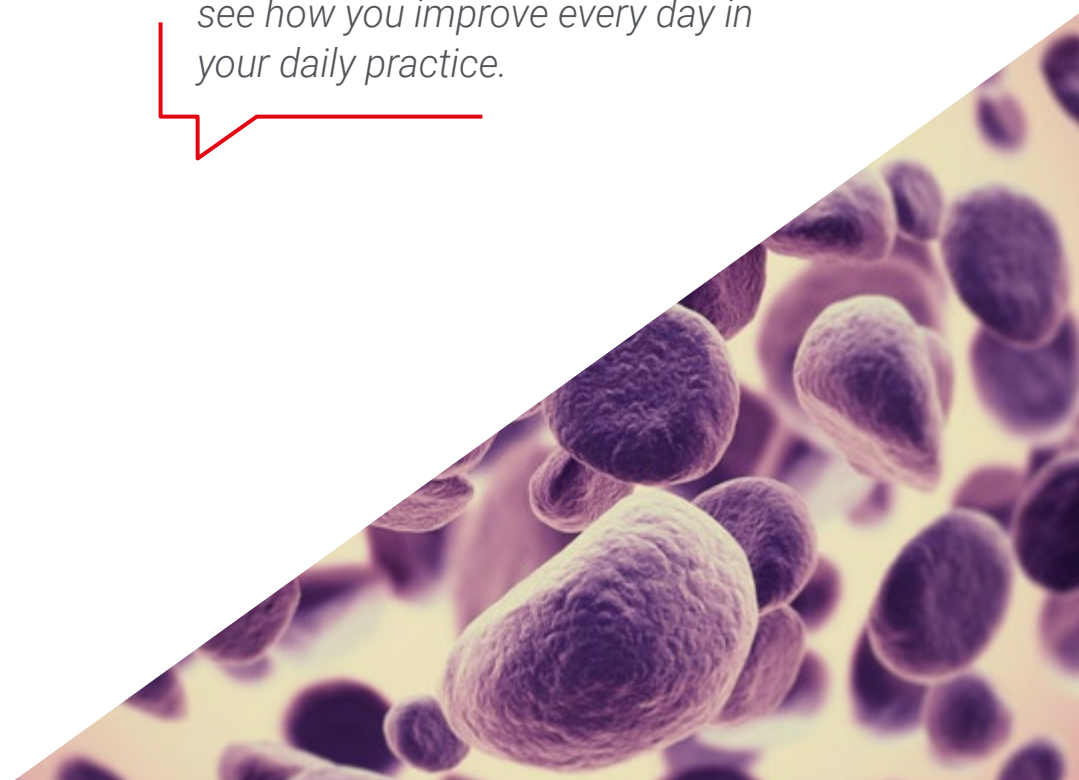
Its teaching staff is made up of prestigious and renowned professionals with a long career in health care, teaching and research, who have worked in many countries on several continents, developing professional and teaching experience that they deliver in an extraordinary way in this Postgraduate Certificate.

The methodological design of this Postgraduate Certificate, developed by a multidisciplinary team of e-learning experts, integrates the latest advances in educational technology for the creation of numerous educational multimedia tools that allow the professional, based primarily around the Problem-Based learning method, to address real problems in their daily clinical practice, which will allow them to advance by acquiring knowledge and developing skills that will impact their future professional work.

It should be noted in this Postgraduate Certificate that each of the contents generated, as well as the videos, self-evaluations, clinical cases and exams, have been thoroughly reviewed, updated, and integrated by the teachers and the team of experts that make up the working group, to facilitate the learning process with a step-by-step approach in order to achieve the teaching program objectives.

*Professional pharmacists should continue their training during their working life in order to learn about the latest developments in oncology and infectious diseases.*

*Immerse yourself in this 100% online Postgraduate Certificate and you will see how you improve every day in your daily practice.*



# 02 Objectives

The main objective of the Postgraduate Certificate is the improvement of pharmacy professionals, by helping them acquire the most up-to-date and innovative scientific knowledge in the field of infectious diseases and how they are treated, allowing them to develop the skills that will turn their daily pharmaceutical practice into a benchmark of the standards of the best scientific evidence available, with a critical, innovative, multidisciplinary and integrative sense.





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*If you are thinking about taking a Postgraduate Certificate in Infections in Oncology Patients, do not miss this opportunity, where you will find the most updated information on the market on this subject”*



## General Objective

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- ♦ Guarantee professional improvement, through up the pharmacist-to-date and in-depth knowledge of the best scientific evidence , for the prevention, diagnosis, and treatment of infectious diseases with a multidisciplinary and integrative approach that facilitates the control of these pathologies

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*This is your opportunity to specialize in the field of infectious diseases and their link to people with cancer”*





## Specific Objectives

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- ◆ Provide students with advanced, in-depth, updated, and multidisciplinary information that allows them to comprehensively approach the process of health-infectious diseases
- ◆ Provide training and practical theoretical improvement that will enable a reliable clinical diagnosis supported by the efficient use of diagnostic methods to indicate an effective integral treatment
- ◆ Develop skills to implement prophylactic plans for the prevention of these diseases
- ◆ Assess and interpret the epidemiological characteristics and conditions in the continents where the appearance and development of infectious diseases often occur
- ◆ Explain the complex interrelationships between infections and different types of immunosuppression

03

# Course Management

Renowned and recognized pharmacists and medical specialists with numerous publications, teaching experience, and professional experience in many countries, where many of the diseases studied have a high morbimortality participate in the teaching program. The teaching staff is made up of a multidisciplinary team from various medical specialities, such as internal medicine, pediatrics, general surgery, gynecology and obstetrics, microbiology, pathological anatomy, pharmacology, among others.



A close-up photograph of a medical procedure. A clear plastic tube is connected to a needle that is inserted into a patient's skin. The background is blurred, showing more of the medical equipment and the patient's skin.

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*Train with us and learn from leading experts in infectious diseases”*

## Management



### Dr. Díaz Pollán, Beatriz

- ◆ Faculty Specialist Déu Hospital La Paz University Hospital
- ◆ Official Doctoral Programme in Clinical Medicine Clinical symptoms, University Rey Juan Carlos
- ◆ Degree in Medicine and Surgery, Universidad Autónoma de Madrid.
- ◆ Master's Degree in Infectious Diseases and Antimicrobial Treatment from CEU Cardenal Herrera University
- ◆ Postgraduate Certificate in Community and Nosocomial Infections from CEU Cardenal Herrera University
- ◆ Postgraduate Certificate in Chronic Infectious Diseases and Imported Infections from CEU Cardenal Herrera University
- ◆ Postgraduate Certificate in Microbiological Diagnosis, Antimicrobial Treatment and Research in Infectious Pathology from CEU Cardenal Herrera University
- ◆ Faculty Specialist Déu Hospital San Carlos Clinical Hospital
- ◆ Resident doctor, San Carlos Clinical Hospital

## Professors

### Dr. Rico, Alicia

- ◆ Specialist in the Microbiology and Parasitology Department at La Paz University Hospital, Madrid
- ◆ Degree in Medicine from the Complutense University of Madrid
- ◆ Doctorate Courses at the Complutense University of Madrid
- ◆ Assistant and co-founder of the Infectious Diseases and Clinical Microbiology Unit, La Paz University Hospital, Madrid
- ◆ Clinical teaching collaborator Department of Medicine of the UAM

### Dr. Ramos, Juan Carlos

- ◆ Doctor at La Paz University Hospital, Madrid
- ◆ Official Doctoral Programme in Clinical Medicine. University of Alcalá
- ◆ Degree in Medicine and Surgery from the Complutense , University of Madrid
- ◆ Master's Degree in Infectious Diseases in Intensive Care, Fundación Universidad-Empresa Valencia
- ◆ Author of several community publications

**Dr. Loeches Yagüe, María Belén**

- ♦ Specialist in the area of Infectious Diseases at La Paz General University Hospital, Madrid.
- ♦ Doctor in Medicine, Autonomous University, Madrid
- ♦ Degree in Medicine at Madrid Complutense University
- ♦ Master in Theoretical and Practical Learning in Infectious Diseases. Complutense University of Madrid
- ♦ Specialised Training in Microbiology and Infectious Diseases. Gregorio Marañón General University Hospital
- ♦ Professor of Infectious Diseases at the Infanta Sofía University Hospital in Madrid, European University of Madrid

**Dr. Arribas López, José Ramón**

- ♦ Head of Department of the Infectious Diseases and Clinical Microbiology Unit, La Paz University Hospital of Internal Medicine, Madrid
- ♦ Doctor in Medicine, Autonomous University, Madrid.
- ♦ Degree in Medicine and Surgery from the Complutense University of Madrid.
- ♦ Coordinator of the High-Level Isolation Unit La Paz – Carlos III
- ♦ Member Interministerial Committee for the management of the Ebola crisis
- ♦ Head of the AIDS and Infectious Diseases research group at IdiPAZ

**Dr. Mora Rillo, Marta**

- ♦ Specialist in the area of Infectious Diseases at La Paz University Hospital
- ♦ Doctor in Medicine, Autonomous University, Madrid
- ♦ Degree in Medicine and Surgery, University of Zaragoza.
- ♦ Master's Degree in Infectious Diseases in Intensive Care, University of Valencia
- ♦ Online Master's Degree in Infectious Diseases and Antimicrobial Treatment from CEU Cardenal Herrera University
- ♦ Master's Degree in Tropical Medicine and International Health, Autonomous University of Madrid
- ♦ Expert in Emerging and High-Risk Virus Pathology, Autonomous University of Madrid
- ♦ Expert in Tropical Medicine, Autonomous University of Madrid

# 04

# Structure and Content

The teaching program has been created to provide the pharmacy professional with the necessary tools for their daily practice in the treatment of Infections in the Oncology Patients. Therefore, the content of this Postgraduate Certificate is composed of the most up-to-date syllabus on the market, which has been developed by leading experts in the field at international level, with the aim of making specialists more accurate in the diagnosis and treatment of this type of infection.





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*With this instructive program you will learn about the main relationships between microorganisms and oncology patients”*

## Module 1: Cancer and Immunosuppression

- 1.1. The Innate and Adaptive Immune Response
  - 1.1.1. Cells and Cytokines in Response to Infectious Agents
  - 1.1.2. Characteristics of the Innate and Adaptive Immune Response
- 1.2. Immunosuppression in Different Conditions in Patients with Sepsis
  - 1.2.1. The role of Cytotoxics in Immunosuppression
  - 1.2.2. The role of Cytotoxics in Immunosuppression
  - 1.2.3. Infection in Transplant Patients
- 1.3. The Oncohematological Patient with Sepsis
  - 1.3.1. Medullary Aplasia
  - 1.3.2. Neutropenia
  - 1.3.3. Infections in Patients with Cancer
- 1.4. The Diabetic Patient with Sepsis
  - 1.4.1. The Immune System in Diabetes Mellitus
  - 1.4.2. Main Infections in the Diabetic Patient
- 1.5. Comprehensive Approach to the Immuno-Compromised Patient with Sepsis
  - 1.5.1. Diagnostic Considerations
  - 1.5.2. Therapeutic Measures



- 1.6. The Link Between Cancer and Micro-organisms
  - 1.6.1. Oncogenesis and Infection
  - 1.6.2. Viruses and Cancer: Epstein Barr Virus Hepatitis B and C Human Papillomavirus T. Herpes cell Lymphoma/Leukemia Virus, Herpes, Kaposi's Sarcoma-associated Virus
- 1.7. Bacterias and Cancer
  - 1.7.1. Helicobacter Pylori.
- 1.8. Parasites and Cancer
  - 1.8.1. Schistosoma Haematobium
  - 1.8.2. Opisthorchis Viverrini
- 1.9. Bacteria Allies Against Cancer
  - 1.9.1. Types of Bacteria

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*A unique, key, and decisive training experience to boost your professional development”*

05

# Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.





*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will be confronted with multiple simulated clinical cases based on real patients, in which they will have to investigate, establish hypotheses and ultimately, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Pharmacists learn better, more quickly and more sustainably over time.

*With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.*



According to Dr. Gervas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, attempting to recreate the actual conditions in a pharmacist's professional practice.

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*Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method”*

The effectiveness of the method is justified by four fundamental achievements:

1. Pharmacists who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



## Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

Our University is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, which represent a real revolution with respect to simply studying and analyzing cases.

*Pharmacists will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.*





At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 115,000 pharmacists have been trained with unprecedented success in all clinical specialties, regardless of the surgical load. This pedagogical methodology is developed in a highly demanding environment, with a university student body with a high socioeconomic profile and an average age of 43.5 years.

*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.



This program offers the best educational material, prepared with professionals in mind:



### Study Material

All teaching material is created specifically for the course by specialist pharmacists who will be teaching the course, so that the didactic development is highly specific and accurate.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



### Video Techniques and Procedures

TECH introduces students to the latest techniques, to the latest educational advances, to the forefront of current pharmaceutical care procedures. All of this, first hand, and explained and detailed with precision to contribute to assimilation and a better understanding. And best of all, you can watch them as many times as you want.



### Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".



### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





### Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



### Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



### Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.



06

# Certificate

The Postgraduate Certificate in Infections in Oncology Patients guarantees, in addition to the most rigorous and up-to-date training, access to a Postgraduate Certificate Diploma issued by TECH Global University.





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*Successfully complete this training program  
and receive your university certificate without  
travel or laborious paperwork”*

This program will allow you to obtain your **Postgraduate Certificate in Infections in Oncology Patients** endorsed by **TECH Global University**, the world's largest online university.

**TECH Global University** is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Infections in Oncology Patients**

Modality: **online**

Duration: **6 weeks**

Accreditation: **4 ECTS**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost..



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